

WHAT IS CLAIMED IS:

1. A path predicting method for a contents delivery apparatus for temporarily storing contents which is preliminarily reserved into a contents storage and
5 delivering the contents from a radio base station to a mobile terminal of which geometric position changes, comprising:

a first step of calculating a plurality of paths each extending from a start point as a present location
10 to a finish point as a destination via a radio base station;

a second step of selecting a radio base station which is on the calculated path and is determined as a contents delivery base station;

a third step of calculating grace time for the mobile
15 terminal to pass through the contents delivery base station and calculating scheduled time to deliver the reserved contents to the mobile terminal; and

a fourth step of determining whether the mobile
20 terminal is off the path to the contents delivery base station or not,

wherein the first to third steps are executed recursively in accordance with the determination in the fourth step, and contents is delivered to the mobile terminal via the contents delivery base station in
25 accordance with results obtained in the second and third steps.

2. The path predicting method for a contents delivery apparatus according to claim 1, wherein the first step includes a fifth step of identifying base stations in a circle including the start point and the finish point.

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3. The path predicting method for a contents delivery apparatus according to claim 2, wherein the first step further includes a sixth step of selecting a predetermined number of paths in order from a shortest path extending via the identified base station.

4. The path predicting method for a contents delivery apparatus according to claim 1, wherein in the first step, a path extending via a plurality of radio base stations is calculated as a plurality of paths each extending from the start point to the finish point via each of the radio base stations.

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5. The path predicting method for a contents delivery apparatus according to claim 1, wherein in the first step, a path extending via a plurality of radio base stations is calculated as one path extending from the start point to the finish point via the plurality of radio base stations.

6. The path predicting method for a contents delivery apparatus according to claim 1, wherein in the second step, a radio base station which is on the calculated path and of which distance from the start point is the shortest is selected as a contents delivery base station.

7. The path predicting method for a contents delivery apparatus according to claim 1, wherein in the third step, an average speed on an ordinary road and one on a highway which are prepared are used.

8. The path predicting method for a contents delivery apparatus according to claim 7, wherein in the third step, a travel speed of the mobile terminal which is calculated on the basis of actual travel information of the mobile terminal is also used.

9. The path predicting method for a contents delivery apparatus according to claim 1, wherein in the third step, traffic information is used.

10. The path predicting method for a contents delivery apparatus according to claim 1, wherein in the fourth step, whether the mobile terminal is off the path

or not is determined on the basis of a present location of the mobile terminal and a distance to the contents delivery base station.

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11. The path predicting method for a contents delivery apparatus according to claim 10, wherein in the fourth step, when the present position of the mobile terminal and the distance to the contents delivery base station exceed allowable values, and the state continues longer than allowable time, it is determined that the mobile terminal is off the path.

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12. The path predicting method for a contents delivery apparatus according to claim 1, wherein in the fourth step, when the mobile terminal does not pass through the contents delivery base station even after lapse of predetermined time since the scheduled time calculated in the third step, it is regarded that the mobile terminal is off the path to the contents delivery base station.

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13. The path predicting method for a contents delivery apparatus according to claim 1, further comprising a seventh step of, when the distance between the contents delivery base station and the mobile terminal becomes equal to or less than a predetermined value,

delivering the contents temporarily stored in the contents storage to the mobile terminal via the contents delivery base station.

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14. The path predicting method for a contents delivery apparatus according to claim 1, further comprising an eighth step of delivering the contents temporarily stored in the contents storage to the mobile terminal via the contents delivery base station by polling between the contents delivery base station and the mobile terminal.

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